deed it is generally believed—that Mr. Hutchings *was himself the contractor for this work*, though in another's name, the party who nominally was the contractor being known to be a subaltern under Mr. Hutchings on many occasions. If this rumour be true, then the grossness of the whole proceeding becomes more and more disgusting. A man beats his brother contractors by the lowness of his tender, and makes it up by charging upwards of 30 per cent. for overlooking his own work!!"

If the rumour be correct, this is a nice illustration of the "running with the hare and hunting with the hounds," consequent on the "builder and architect" system pursued in many of our provincial towns, and to the evils resulting from which we have felt it our duty to direct attention on previous occasions.

MATTERS MECHANICAL.

PATENT LAWS—PERPETUAL MOTION—BRICKWORK.

SIR,—Although unconnected with building, I unaffectedly declare I would rather "lose a meal" than miss a sight of THE BUILDER. First, because I take an interest in the information it contains; and secondly, because of its *truthful* sympathy in the interests of, and understanding of, the English workman,—the sympathy of *heart*, and not of vocation: I earnestly entreat, therefore, your attention to that which materially concerns his interests,—I allude to the present state of the patent laws. Yes, Sir, the country whose prosperity depends more than that of any other country in Europe on its manufactures, and its manufactures on its machinery, is the country that throws by its laws all the obstacles in its power in the way of the poor but ingenious improver of that machinery. Let him be a 'Brindley,' a 'Watt,' or a 'Stephenson,' unless he can procure a patron to advance some 400*l.* or 500*l.* merely to use his own, he may die as he lived, unknown and uncared for. I speak feelingly: I am one of the many who, with a passion for mechanical invention, is debarred by these laws and his poverty from (perhaps) benefiting himself and family, and possibly his country, by the due use of those faculties with which Providence has endowed him. For myself, I give up hoping against hope, and resign myself to my fourteen or sixteen hours' labour per diem for a bread and cheese pittance; but others would benefit by the change, which *I* scarcely hope ever to see, unless the "press" take the question in hand. Would that they did so: I should not then despair of seeing those odious laws (which I firmly believe are retained *solely* for the patronage and bureaucracy the fees maintain) abolished, and replaced by a just and equitable enactment.*

While I am writing, Mr. Editor, I shall venture two or three observations on paragraphs that have appeared in THE BUILDER. I will take, first, your note on the (rumoured) discovery of *perpetual motion*. I have always entertained the same opinion as yourself, that the thing was a delusion, and utterly *impossible*; and yet in the face of that belief, I have been compelled to retract and come to the conclusion that it *is* possible. I will give you the cause of this belief. One of my first inventions was a system of atmospheric propulsion, in the course of which the phenomenon of atmospheric pressure was naturally forced on me; and in the course of my investigations on the subject, *I hit on a method of obtaining a vacuum, and keeping that vacuum* CONTINUOUSLY *for working purposes*, being practically, in fact, what is termed perpetual motion. I have said I was no believer in perpetual motion, and therefore I threw the subject aside, feeling that there MUST be some undetected fallacy in the plan. Some time after I met in some scientific journal (I am not sure, but I think your own) with a notice addressed to a "Perpetual Motion" correspondent, in which, after impressing on him that the pursuit was a fallacious one, it goes on to say, that till he could discover some means of obtaining a vacuum, and keeping it, he might give up all hope of succeeding. The means indicated so singularly tallied with the means by which I had imagined the given end could be obtained, that I again resumed the idea, and consulted all the authorities I could get hold of on the subject, the result of which was, that as no natural or mechanical law was violated, but on the contrary, that it was the natural result of such laws, and therefore perfectly practicable, I was led to believe that perpetual motion is no delusion, but *a fact*. I should not be at all surprised if the discovery alluded to by your foreign correspondent proves authentic, and possibly identical with my own, the more so, that I do not think it well suited to marine navigation, though *possible to be so used*: leaving all this out of the question, and right or not, I think our scientific men have singularly neglected the atmosphere as a working power.

The method proposed by a correspondent of yours in a late number of THE BUILDER, of applying vulcanised India rubber to the longitudinal tube of the atmospheric railway has objections: the India rubber would, as you observed, be forced into the tube by the pressure of the external atmosphere, and thus fail. There are, however, other means by which this singularly valuable material could be satisfactorily applied, but at present, and probably for some time to come, NO PLAN of air propulsion, *however simple and economic*, has any chance of being adopted by any railway company, in the face of the abandonment of the system by the South Devon line. I much regret the failure of Samuda's system, as, had it succeeded, other systems would have had a fair chance of being tested. I cannot say I am much surprised at the result, as Mr. Samuda was either too confident or too proud to receive any hint from any quarter. I am, however, still convinced the *principle* is sound, and will yet supersede the locomotive.

Your last number but one has a valuable article on the use of brick moulding, &c., and exemplifies another instance of our wise fiscal laws in preventing the proper use of material in building, but rail as we may we can scarcely alter, but must put up with them; all we can do is to seek the best means of obviating them, and I therefore take the liberty of giving an idea on the subject. Some time ago, while casually looking on at some bricklayers at work, I was struck with the great waste of material and time, in the most skilful workman frequently destroying two or three bricks before he could get one to some particular size or angle. Thinking over the subject, I devised a modification of the *common lathe*, by which an ordinary bricklayer's labourer could cut a brick to any given size or angle in less time than the most ready workman could hack it into rough form with his trowel. I thought, after the accident at the Birmingham Railway station, of submitting the plan to the contractor, for the rebuilding the columns, piers, &c., on the plan of first cutting the bricks to a geometrical form to dovetail into a *solid* mass—but expecting it would prove, as usual, trouble in vain, I abandoned the idea altogether. The article in question has brought the subject again to my mind, and I perceive the subject has greater scope than I had imagined. By the means I have indicated a common brick may be *readily* cut to almost any form for ornamental purposes, the surfaces being nearly as accurate as though ground by hand labour; in fact any form, *circular, angular, or plane*, could be given it, at a moderate cost. I should be glad if any builder would give me an opportunity of practically testing the merit of the plan (if it have any); but, Sir, as I have said, I have given up hoping against hope, and this brings me again to my earnest wish that the press, and more particularly THE BUILDER, will take the question of reform of the patent laws in hand, in the hope that the poor workman may have *some* chance of bringing before the public, and obtaining for himself, the fruits of his invention.—I am, Sir, &c.,

City-road. R. G. BARRATT.

* A Government inquiry into the operation of these laws is pending.—ED.

FINE ARTS IN NORWICH.—Amongst the preparations for the forthcoming musical festival in Norwich, is a collection of modern works of art, nearly 400 in number, comprising pictures by Turner, Eastlake, Maclise, Etty, Bright, Danby, Pyne, Stanfield, and other good artists. It is said that so fine a collection has never been seen in Norwich before.

NOTES IN THE PROVINCES.

A TENTH window in the restoration of King's College Chapel, Cambridge, has been finished. The colours are said to be more subdued than in many of those already restored. The expense of the whole restoration will be nearly 6,000*l.*——The Grimsby Docks, according to the *Lincolnshire Times*, are proceeding satisfactorily, under their chief engineer, Mr. Rendell, and resident engineer, Mr. A. Smith. In inclosing the area of 150 acres from the sea, 10,000 tons of chalk have of late been weekly conveyed by a railway for the embankment. The 'blow sands,' however, have been interfering with the progress at one part, where there has been a sinking or defect in the piles in consequence. The first stone of 'the Royal Albert,' 37-acre dock, will be laid, it is still expected, by H. R. H. Prince Albert, next month.——At Whimple Church, Devon, which has very lately undergone expensive renovation, the dry rot, it is said, has seized on the new wood work, the whole of the wainscoating or wall boarding of which calls for immediate renewal.——At a meeting of the Monmouth Town Council last week, tenders were received for a trifling job of plastering and repairing some houses, the highest of which was 14*l.* 17*s.* 6*d.*, and the successful one 4*l.* 15*s.*!——A site near Birmingham has been given by Mr. Adderley, M.P., to the Worcester Board of Education, for a training institution on a large scale. The same public spirited gentleman is shortly to lay the first stone of a church in Saltley, near Birmingham, to which he appears to have also presented a site and 3,000*l.*, with 150*l.* per annum for endowment. It is to be in the Gothic style, with tower and transept; sittings 1,000, two-thirds free. Exertions are being made for the erection of a district church and school at St. Jude's, Birmingham. General Howard Vyse, who gave a large site for the National School-rooms at St. Paul's, Birmingham, has given a valuable site for a school in St. Thomas's, to the erection of which 400*l.* have been contributed by the association for extending infant schools.——Some of the nailers in the district round Rowley Regis, being out on strike for old prices, a meeting of those in Rowley Regis has been held, and resolutions have been come to to support them, and to parade the district and meet every day till the masters yield to their demand.——In the engineering department at the Birkenhead Dock works, preparations are in progress for the recommencement of the construction of the docks forthwith. Coal from the Welsh mines can be brought, it is said, to Birkenhead Docks, and put on board vessels at very considerably less cost, and with far greater facility, than from the Lancashire coal-field.——The foundation-stone of the schools in connection with the Independent chapel, Cavendish-street, Manchester, was laid on Monday week. They will be in the Tudor style, and will comprise entrance-hall, library, and lecture rooms, private class rooms, &c.; estimated expense, upwards of 5,000*l.*——Some masons at Glasgow have struck work on a demand of 12½ per cent. advance on 1*l.* a week's wages. According to the local papers there is "a shoal of unemployed masons from the country" quite ready to take their places.——The *Belfast Northern Whig* says that Government has resolved to establish three schools of design in Ireland; namely, at Belfast, Dublin, and Cork.

NEW CORN EXCHANGE, LEWES.—Another, and yet another! The new Corn Exchange at Lewes is the largest room in the county of Sussex: the dimensions are—156 feet long, 33 feet wide, and 36 feet high. On other days but Tuesdays it is used, if required, for assemblies, concerts, &c.; in fact, it is belonging to the Star Hotel, and the principal entrance is through a lobby leading from a very beautiful carved staircase, which many years ago belonged to one of the largest mansions in the county. It has a light iron roof (railway station style), from which it is lighted on both sides, and though quite plain and without pretence, the apartment has a character, if we may judge from a lithograph of it, which is creditable to the taste of its architect, Mr. William Dunk.

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